

## REMARKS

By the present amendment, Applicants amend claims 1, 15, and 45-59 to more appropriately define the present invention. Claims 1-11 and 13-59 are pending in the application.

In the Office Action dated September 25, 2003, the Examiner rejected claims 1, 15, 18, 45, 50, and 55 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,139,433 to Miyamoto et al. ("Miyamoto") in view of U.S. Patent No. 5,358,259 to Best ("Best"); rejected claims 2-11, 21-24, 26-35 under 35 U.S.C. §103(a) as being unpatentable over Miyamoto in view of Best, and further in view of U.S. Patent No. 5,853,324 to Kami et al. ("Kami"). The Examiner objected to claims 16, 17, 19, 20, 46-49, 51-54, and 56-59 as being dependent upon a rejected base claim, but indicated they were otherwise allowable if rewritten in independent form. Finally, the Examiner allowed claims 13, 14, 25, and 36-44. Applicants thank the Examiner for the indication of allowable subject matter.

Claims 1, 15, 18, 45, 50, and 55 were rejected under §103(a) as being obvious over Miyamoto in view of Best. Applicant submits the Examiner has failed to establish a *prima facie* case of obviousness. In order to maintain a valid §103(a) rejection, each of three requirements must be met. First, the reference or references, taken alone or combined, must teach or suggest each and every element recited in the claims. (See M.P.E.P. §2143.03 (8<sup>th</sup> ed. 2001).) Second, there must be some suggestion or motivation, either in the reference(s) themselves or in the knowledge generally available to one of ordinary skill in the art, to combine the references in a manner resulting in the claimed invention. Third, a reasonable expectation of success must exist. Moreover,

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each of these requirements must “be found in the prior art, and not be based on Applicant’s disclosure.” (M.P.E.P. § 2143 (8<sup>th</sup> ed. 2001).)

Regarding claim 1, Miyamoto teaches a home-based video game system providing three-dimensional character and environment effects wherein a player is provided control capabilities (col. 1, lines 34-37). The character, being controlled by the player through a control device such as a joystick, moves through a variety of three-dimensional environments trying to accomplish a variety of predefined goals (col. 1, line 53 - col. 2, line 29). The player may also control the “camera,” or the displayed point of view in the virtual three-dimensional world. Changing the viewing perspective of the virtual world can aid the player in accomplishing the predefined goals of the game (col. 2, lines 41-67). In order to impart some sense of realism, the character within the video game system displays a variety of “physical reactions” in response to various external conditions. More specifically, Miyamoto discloses a processing method which varies the animation sequences of a character (Mario) based upon game environment or time (col. 44, line 57 - col. 45, line 9; Fig. 32). As shown in Fig. 32, the different animation sequences merely have a one-to-one relationship with the corresponding environmental condition.

Miyamoto, however, fails to teach or suggest, at least, “artificial intelligence (AI) processing means for executing AI processing incorporating emotions of the movable body influenced by circumstances, evaluation/determination, and factors of behaviors in said virtual three-dimensional space, wherein the AI processing determines an action which is independently associated with the movable body.” (emphasis added.)

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Furthermore, the Examiner admits this deficiency of Miyamoto in the Office Action (page 2, section #2, lines 10-13).

In this respect, the Examiner attempted to overcome the admitted shortcomings of Miyamoto by combining it with Best. Best, however, fails to cure the deficiencies of Miyamoto. Best merely teaches a video game which takes the form of a branching story that simulates dialog between two or more on-screen characters and two or more human game players (col. 3, lines 15-18). During game play as the story progresses, at predefined points the player is presented with a number of predetermined choices. The player selects one of these choices to direct the action of the on-screen character (col. 3, line 63 - col. 4, line 9). While the on-screen characters are programmed to display emotion in the animated sequences using simulated facial expressions, dialog, and vocal expressions (see col. 3, line 63 - col. 4, line 16; Figs. 2 and 6), their actions are controlled merely by a series of branches based on the player's selection. Specifically, Best teaches two types of branching, namely dialog and scene branching (see Fig. 8). Dialog branching allows the player to select alternative verbal responses of an on-screen character (col. 9, lines 15-16). Scene branching permit alternative scene changes based upon a player's choice (col. 9, lines 19-23). In summary, the on-screen character's actions and responses are based upon the players selection of a set of predetermined choices presented throughout the progression of the game.

Furthermore, the Examiner admits that Best merely teaches a "video game where the character of the game covey[s] emotion." (See Office Action, page 2, section #2, line 15 through page 3, section #2, line 1.) (emphasis added.)

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In summary, Miyamoto and Best, either separately or in combination, fail to teach or suggest at least an “artificial intelligence (AI) processing means . . . incorporating emotions of the movable body . . . wherein the AI processing determines an action which is independently associated with the movable body.” as recited in claim 1. (emphasis added.)

Moreover, the Examiner fails to provide an adequate motivation to combine the teachings of Miyamoto and Best. The Examiner purports the combination would have been obvious to one of ordinary skill in the art because Miyamoto and Best “both disclose video game systems.” (see Office Action, page 3, section #2, line 1) and that Best is “advantageous” given its disclosure as set forth by the Examiner on page 3, section #2, lines 2-7). Applicants submit there would be no motivation to combine the teachings of Best and Miyamoto because Miyamoto already teaches a video game which utilizes a branching story (See Fig. 15B). Furthermore, Applicants respectfully submit that the combination of Best and Miyamoto has no reasonable chance of success because they both fail to teach all of the features as recited in claim 1.

Accordingly, Applicants respectfully request the Examiner withdraw the §103(a) rejection of claim 1.

Independent claim 15 includes recitations similar to claim 1, and is allowable for at least the reasons presented for allowable claim 1. Claims 16 and 17 depend from allowable claim 15, and are allowable at least by virtue of their dependence. Applicants therefore respectfully request the Examiner withdraw the objection to claims 16 and 17.

Regarding claim 18, Miyamoto further teaches a process whereby a sequence of movements which may be performed by a character (Mario) result from the actuation of

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a combination of controller inputs (col. 39, line 58 - col. 40, line 25; Figs. 27A-B). Specifically, Fig. 27A shows a flow diagram which depicts how the video game system monitors the state of the player's controls, and how the resulting state of the on-screen character are subsequently changed (col. 39, line 60 - col. 40, line 8). Fig. 27B shows how a on-screen character's next state is based on its current state and the actuation of a particular control mechanism (col. 40, lines 9-14).

Conversely, Miyamoto fails to teach or suggest, at least, "first operating means for operating an impulse of the subpart motion communicated to the main part under a presumption that the connection point of said subpart to said main part is a fixed point." as recited in claim 18.

Best fails to cure the deficiencies of Miyamoto in this regard as it is silent with respect to anything related to the features of claim 18. Moreover, the Examiner apparently recognized the shortcomings of Best since the teachings of this reference were not applied in the §103(a) rejection of claim 18.

Accordingly, Applicants respectfully request the Examiner to withdraw the obviousness rejection of claim 18.

Claims 19 and 20 depend from allowable claim 18, therefore Applicants respectfully request the Examiner to withdraw the objection to claims 19 and 20.

Regarding claim 45, as described in more detail above for the allowability of claim 1, Miyamoto teaches a character within the video game system which displays a variety of "physical reactions" in response to various external conditions. More specifically, Miyamoto discloses a processing method which varies the animation

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sequences of a character (Mario) based upon game environment or time (col. 44, line 57 - col. 45, line 9; Fig. 32).

However, Miyamoto fails to teach or suggest, at least “determining a behavior of the at least one character based on the emotion factor, wherein the behavior is determined independently for each character[,]” as recited in claim 45.

Best fails to cure the shortcomings of Miyamoto in this aspect. As described in detail for the allowability of claim 1 and set forth by the Examiner, Best merely teaches a “video game where the character of the game covey[s] emotion.” (See Office Action, page 2, section #2, line 15 through page 3, section #2, line 1.) (emphasis added.)

Miyamoto and Best, either separately or in combination, fail to teach or suggest at least “determining a behavior of the at least one character based on the emotion factor, wherein the behavior is determined independently for each character[,]” as recited in claim 45. Accordingly, Applicants respectfully request the Examiner to withdraw the rejection of claim 45.

Claims 46-49 depend from allowable claim 45, and are allowable at least by virtue of their dependency. Applicants therefore respectfully request the Examiner to withdraw the objection to claims 46-49.

Claims 50 and 55 contain recitations similar to claim 45, and are allowable at least for the same reasons provided above for the allowability of claim 45. Applicants respectfully request the Examiner to withdraw the rejections to claims 50 and 55.

Claims 51-54 and 56-59 depend from claims 50 and 55, respectively, and are allowable at least by virtue of their dependency. Applicants respectfully request the Examiner to withdraw the objection to claims 51-54 and 56-59.

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Claims 2-11, 21-24, and 26-35 are rejected under §103(a) as being obvious over Miyamoto in view of Best, and further in view of Kami. Applicant submits the Examiner has failed to establish a *prima facie* case of obviousness.

Claims 2-11, and 24 by virtue of their dependency from claim 1, include all of the features recited therein. Accordingly, as presented above for claim 1, Miyamoto and Best, separately or in combination, fail to teach or suggest at least “artificial intelligence (AI) processing means for executing AI processing incorporating emotions of the movable body influenced by circumstances, evaluation/determination, and factors of behaviors in said virtual three-dimensional space, wherein the AI processing determines an action which is independently associated with the movable body” (emphasis added) as required by claims 2-11 and 24.

Kami fails to cure the shortcoming of Miyamoto and Best in this regard. Conversely, Kami teaches a shooting game machine wherein a player pulls a trigger of a gun to shoot at targets contained in images shown on a display. The game detects a supposed impact position and, if the impact position is coincident with the position of the target, the machine determines an imaginary bullet has hit the target (col. 6, lines 14-20). More specifically, Kami discloses three scenes in which a bullet shot by an enemy misses, grazes, and hits the virtual player (col. 10, lines 27-53; Figs. 8A-C). The attack ability of enemies are based upon a hit rate which is based on a measurement of a timing system (col. 11, lines 26-35).

In summary, neither Miyamoto, Best, or Kami, either separately or in any combination, teach or suggest at least “artificial intelligence (AI) processing means . . .

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incorporating emotions of the movable body . . . wherein the AI processing determines an action which is independently associated with the movable body" (emphasis added) as required by claims 2-11 and 24.

Accordingly, Applicants respectfully request the Examiner to withdraw the §103 rejection of claims 2-11 and 24.

Regarding claim 21, Miyamoto, Best, and Kami, either separately or in any combination, fail to teach or suggest at least "interpolation means for performing motion interpolation based on the operational results of said operating means."

Miyamoto merely discloses various movements of a character based upon corresponding controller inputs as described above for claim 18. Best and Kami are silent with respect to an "interpolation means for performing motion interpolation. . . ."

Accordingly, Applicant respectfully requests the Examiner to withdraw the §103(a) rejection of claim 21.

Claim 28 depends from claim 21 and is allowable for at least the same reasons provided above for allowable claim 21.

Regarding claim 22, Miyamoto, Best, and Kami, either separately or in any combination, fail to teach or suggest at least "collision judgment means for judging the collision with said movable object while moving said structural object, wherein a coordinate, being fixed on a collision surface of the structural object while moving, is described in a coordinate system associated with the structural object, and based on said coordinate, the collision is determined."

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Miyamoto merely discloses a collision determination routine which judges a collision between a moving object (Mario) and a structural object based on determining distances between points described in a single coordinate system (col. 32, lines 13-52; Fig. 19B). Furthermore, Best and Kami are silent with respect to collision judgment means.

Accordingly, Applicant respectfully requests the Examiner to withdraw the §103(a) rejection of claim 22.

Claim 23 depends from claim 22 and is allowable for at least the same reasons provided above for allowable claim 22. Applicant therefore requests the Examiner to withdraw the §103(a) rejection of claim 22.

Claim 29 depends from allowable claim 22 and this therefore allowable at least due to its dependency.

Claim 26, by virtue of its dependency from claim 15, includes all of the features recited therein. As discussed above for allowable claim 15, Miyamoto and Best, separately or in combination, fail to teach or suggest at least “artificial intelligence (AI) processing means for executing AI processing incorporating emotions of said enemy character influenced by circumstances, evaluation/determination, and factors of behaviors in said game, wherein the AI processing determines an action which is independently associated with the enemy character” (emphasis added) as required by claim 26.

Kami fails to cure the deficiencies of Miyamoto and Best in this regard, as Kami is silent with respect to, at least, AI processing means.

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Accordingly, since Miyamoto, Best, and Kami, fail to teach or suggest all of the features required by claim 26, Applicants respectfully request the Examiner withdraw the §103(a) rejection.

Claim 27, by virtue of its dependency from claim 18, includes all of the features recited therein. As discussed above for allowable claim 18, Miyamoto and Best, separately or in combination, fail to teach or suggest at least “first operating means for operating an impulse of the subpart motion communicated to the main part under a presumption that the connection point of said subpart to said main part is a fixed point[,]” as required by claim 27.

Kami fails to cure the deficiencies of Miyamoto and Best in this regard, as Kami is silent with respect to, at least, “first operating means for operating an impulse . . . .”

Accordingly, since Miyamoto, Best, and Kami, either separately or in any combination, fail to teach or suggest all of the features required by claim 27, Applicants respectfully request the Examiner withdraw the §103(a) rejection.

Regarding claim 30, Miyamoto, Best, and Kami, either separately or in any combination, fail to teach or suggest at least, “computing an angle between the first direction and the second direction and rotating a line of sight of the camera based on the angle computed” as recited in claim 30.

Miyamoto merely teaches that a player can change the viewpoint by pressing a button on the controller (col. 38, lines 24-26) and select one of nine camera modes.

One of the disclosed camera modes includes determining from the first position

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indicated to the second position indicated, the apparent camera perspective changes with Mario's movement with the line of view of the first and second positions intersecting at the identified origin (col. 37, lines 21-25; Fig. 23A). Best and Kami are silent with respect to "computing an angle between the first direction . . ." as recited in claim 30.

Therefore, Applicants respectfully request the Examiner to withdraw the §103 rejection of claim 30.

Claims 31-35 include features similar to claim 31, and are therefore allowable for at least the reasons provide for allowable claim 30. Applicants accordingly request the Examiner to withdraw the §103 rejection of claims 31-35.


In view of the foregoing remarks, Applicant respectfully requests reconsideration and reexamination of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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